

## ABSTRACT

To reduce the size, weight and cost of an interrogator which is included in an RFID system and required to have a high  
5 output power, the interrogator for transmitting a signal shares a radio wave source or a power supply with a portable wireless terminal such as a mobile phone or a portable communication device. For this purpose, a radio frequency transmitter signal is subjected to amplitude modulation by information to be  
10 transmitted to a transponder. Furthermore, part of the radio frequency transmitter signal extracted using a coupler is used to perform synchronous detection on a radio frequency receiver signal returned from the transponder, and data coming from the transponder are extracted.